

REMARKS

Claims 1-10 are pending in the application and are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 6,455,292 (referred to as “Oikawa”) in view of Richard Stallman, “GNU Emacs 19 Manual” (referred to as “Stallman”).

Applicants amend the claims as shown above and request reconsideration.

As a general comment, despite the claim amendments, Applicants stand by every statement made in their previous response showing why the claimed subject matter is patentable over Oikawa and Stallman. The Office Action indicates those statements were not persuasive and cites text in Oikawa explaining why they were not persuasive; however, Applicants respectfully submit that the sections of text cited in the Office Action do not show any errors in Applicants’ prior statements but instead tend to show those statements are correct.

Applicants admit there is a general correspondence between the testing apparatus disclosed in Oikawa and the testing apparatus of the claimed invention. Referring to both Oikawa and the present application, each illustrates in Fig. 1 a testing apparatus comprising an engineering work station (EWS) 10, a test processor or tester processor 20, and a repair analysis computing unit or “tester” 30. The apparatus of claim 1 recites elements that correspond to the test processor 20 and the repair analysis computing unit or tester 30 but there is no feature recited in claim 1 that corresponds to the EWS 10.

Significant features of the claimed invention pertain only to the repair analysis computing unit or tester 30; however, the Office Action appears to rely upon features disclosed in Oikawa for either the test processor 20 or the EWS 10 to reject the claims. This reliance is more apparent from the reasons given to support the rejections of the dependent claims.

Claim 1

The basic argument used to reject claim 1 is as follows:

- (1) Oikawa teaches everything in claim 1 except for inserting user functions at points between operations of a memory repair analysis program;
- (2) Stallman teaches the use of “hooks” that can be inserted between operations of a memory analysis program to change data processed by that program; and
- (3) it would have been obvious to modify the memory repair analysis program in Oikawa with the “hooks” Stallman, thereby obtaining the invention as claimed.

Applicants respectfully submit that the Office Action states incorrectly what is disclosed in Oikawa and Stallman. For example, Stallman discloses nothing about memory analysis. The statement on

page 5 that Stallman teaches a “means for inserting user functions ... between operations of the memory repair analysis program ...” is not correct. Other statements that Stallman discloses something about memory repair analysis are also not correct.

Furthermore, contrary to what is asserted in the Office Action, Oikawa does not teach or suggest memory repair analysis that analyzes “defective memory cell information based on a specific defective memory cell repair conditions that are applicable to a specific type semiconductor device having specific type memory structure other than the regular type memory structure” (this feature in claim 1 is amended above to read “repair analysis of the defective memory cell information for a specific type memory device that has a specific redundancy structure and has the specific repair conditions”).

The Office Action indicates this feature is disclosed in Oikawa in col. 8 lns. 28-36; however, this text refers primarily to initialization and reporting functions carried out by the test processor 20. The text mentions only briefly the repair analysis itself, which is carried out in the tester 30. There is nothing in this text that discloses or suggests repair analysis of defective memory cells for specific types of memory devices other than the regular type of memory structure (or the “specific redundancy structure” recited in the amended claim).

If it is still believed this text discloses this feature, Applicants request that the next office action explain where it teaches making a distinction between different types of devices.

The arguments set forth in the Office Action also appear to ignore what is actually known from the prior art and instead rely on speculation that is unsupported by the prior art. Applicants submitted in their previous response some material that shows what is known about the “hooks” disclosed in Stallman. These hooks may be used to automate functions like those a user can perform but there is no suggestion these hooks can be used to transform the disclosed text editor into a program with new capabilities.

The Office Action responded by quoting a statement from Stallman, “You can use any valid LISP function as the hook function.” Although this statement is true, it does not change the fact that the types of things that can be accomplished by these LISP functions are limited by the data that are available for input to the hooks and the subsequent processing that is available to respond to the output of the hooks. Stallman did not teach and, to the best of our knowledge, the prior art did not teach that that these hooks could be used to add a feature not already present in the Emacs editor. The statement quoted in the Office Action, when taken in context, does not teach anything contrary.

Even if one overlooks what was actually known and taught in the prior art and assumes these hooks could have been used to introduce new functions, the hooks in Stallman cannot be combined with teachings in Oikawa to obtain the claimed invention. The hooks in Stallman rely upon special features of the Emacs editor that allow the installation of hooks. These features do not exist in the tester 30 of Oikawa.

The tester 30 of Oikawa does not have anything like the claimed insertion point. This device was not capable of implementing user programs or hooks as claimed and significant modifications were necessary, such as the additional components shown schematically in Fig. 1 of the present application. Applicants respectfully submit that the required changes were not obvious and there were no obvious reasons to make them.

In summary, the reasons stated in the Office Action to reject claim 1 attribute teachings to Oikawa and Stallman that are not actually taught, they appear to ignore what was actually known in the prior art, and they rely on features having been present in the tester 30 that were not present and were not obvious to add. Similar reasons apply to claim 6.

Both claim 1 and 6 are amended as shown above, further clarifying their distinctions over the prior art.

Dependent Claims 2, 3, 5, 7-10

The claims dependent on claims 1 and 6 add additional features. A few are mentioned here.

Claim 2 as examined recited a “memory repair analysis public function means for inserting the user functions to the user function insertion points through intervention of a memory repair analysis public function” that the Office Action indicates is not taught in Oikawa but alleges it is taught in Stallman. With due respect, this is a gross mischaracterization of Stallman. Stallman teaches nothing about memory repair analysis. This also applies to reasons given for claims 7 and 9.

In addition, claim 2 is amended to recite additional features that are not disclosed in Oikawa or Stallman.

Claim 5 as examined and as amended recite similar features. Reasons given in the Office Action to reject claim 5 refer to text and illustrations in Oikawa that pertain to the EWS 10 and the test processor 20 but not to the tester 30. In contrast to this disclosure, the features of claim 5 pertain to the tester 30. Applicants respectfully submit that the cited text does not teach the recited features and, furthermore, do not pertain to the testing apparatus as claimed.

The method of claim 10 as examined recited “selecting a set of user functions that corresponds to the type of the semiconductor device under test from among a plurality of sets of

user functions provided correspondingly to a plurality of repair conditions predetermined for the types of semiconductor devices” Amended claim 10 recites a similar step. The Office Action indicates this step is disclosed in Oikawa in col. 6 lns. 32-43 and col. 8 lns. 28-36. The text in col. 8 is not very relevant as explained above. The text in col. 6 is more relevant to the extent that it pertains to the tester 30; however, none of this text suggests a set of user functions or different repair conditions as claimed.

If it is still thought that this text or any other text in Oikawa teaches this claim feature, Applicants respectfully request that the next Office Action point out what is thought to be the set of user functions that correspond to device type, the conditions that are used to select them, and the feature of the testing apparatus that selects the functions according to these repair conditions.


New Claims 11-14

New claims 11-14 are dependent on either claim 1 or claim 6 and recite additional features of repair analysis that are not disclosed in the cited prior art.

CONCLUSION

Applicants amend the claims and request reconsideration in view of the preceding remarks.

Respectfully submitted,



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